Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte MANFRED UEBERSCHAR,
HARALD HESS and RUDOLF MUNCH

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Appeal No. 2001-2440
Application 09/309,066

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ON BRIEF

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Before KIMLIN, OWENS, and TIMM, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from the final rejection of claims 1-11, which are all of the claims in the application.

THE INVENTION

The appellants' claimed invention is directed toward a method for coating a paper or cardboard web. Claim 1 is illustrative:

1. A method for one of direct and indirect application of a coating medium onto a moving material web, said material web being one of a paper web and a cardboard web, said method comprising the steps of:

applying the coating medium onto the moving material web with an applicator device, a volume of the coating medium applied within a predetermined time period being adjustable,

associating a metering element with the moving material web, said metering element being disposed after said applicator device relative to a direction of travel of the moving material web;

exerting an adjustable actuating force upon said metering element to thereby meter the applied coating medium;

measuring a coating weight of the coating medium applied to the moving material web;

comparing said measured coating weight to a predetermined desired value;

reducing the volume of the coating medium applied and concurrently maintaining a substantially constant actuating force within said predetermined time period when said measured coating weight exceeds said predetermined desired value; and

reducing said adjustable actuating force exerted upon said metering element and concurrently maintaining a substantially constant volume of the coating medium when said measured coating weight is less than said predetermined desired value.

THE REFERENCES

McAleavey	5,496,407	Mar. 5, 1996
Ueberschär et al. (Ueberschär)	6,010,739	Jan. 4, 2000 (filed Sep. 10, 1997)
Plomer et al. (DE '183)[1] (German patent application)	196 05 183 A1	Aug. 14, 1997

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows:

claims 1-6 and 8-11 over McAleavey in view of DE '183, and

claim 7 over McAleavey in view of DE '183 and Ueberschär.

[1] Citations herein to DE '183 are to the English translation thereof which is of record.

OPINION

We reverse the aforementioned rejections. We need to address only claim 1, which is the sole independent claim.[2]

McAleavey discloses a method for direct application of a coating medium (23) onto a moving material web (25) by 1) applying the coating medium onto the moving web with an applicator device (51), a volume of the coating medium applied within a predetermined time period being adjustable (col. 7, lines 20-30), 2) associating a metering element (63) with the moving material web, the metering element being disposed after the applicator device relative to a direction of travel of the moving material web (figure 2), 3) exerting an adjustable actuating force upon the metering element to thereby meter the applied coating medium (col. 5, lines 1-15; col. 5, line 30 - col. 6, line 12), 4) measuring a coating thickness of the coating medium applied to the moving material web and comparing the measured thickness to a predetermined desired value (col. 6, lines 13-62), and 5) causing the measured thickness to equal the desired thickness by varying the size of the space between the

[2] Ueberschär is not relied upon by the examiner for a teaching which remedies the deficiency in McAleavey and DE '183 as to claim 1.

metering element and the moving material web and/or by varying the pumping rate of the coating medium from the applicator device to the moving material web (col. 5, lines 1-5; col. 8, lines 59-65). McAleavey states that "[t]he present invention, generally speaking, provides a system and method for monitoring and controlling the thickness of laminates" (col. 2, lines 2-4). The only disclosed application of the system and method, however, is for applying cathode and electrolyte layers to a metal substrate in the formation of a battery (col. 3, lines 23-61).

DE '183 discloses a method for regulating the cross-sectional coating weight of a fluid or pasty medium which is applied by an applicator to a traveling paper or cardboard web and then is spread to a final coating thickness by a doctor element (pages 1-2). The applicator includes a dosing slot (4) having lips which are adjustable so as to vary the distance between them and, thereby, to vary the flow of liquid or pasty medium, the adjustment advantageously being accomplished by a control circuit based upon the measured cross-sectional coating weight of the fluid or pasty medium. *See id.* Long wave and short wave corrections of the coating weight advantageously are obtained by, respectively, the dosing slot and the doctor

element, both of which are integrated into the control circuit (pages 4-5). A control computer distributes to a dosing element adjustment device (20) and a doctor element adjustment device (40) the adjustments required to correct the cross-sectional weight (pages 7 and 9).

The examiner argues (answer, page 7):

> It would further have been obvious that a review of the combination of references in their entirety would suggest that the feedback control pattern of McAleavey could be used with a paper or cardboard web as suggested by '183 with an expectation of desirable coating control because McAleavey teaches a feedback control pattern for desirably controlling coating thickness and '183 teaches that it is also desirable to use feedback control patterns for controlling coating when coating paper or cardboard webs.

In the DE '183 feedback control, however, the adjustment devices for the dosing slot and the doctor element are adjusted simultaneously to bring about the desired adjustment of the long wave and short wave coating weight deviations (pages 6-7). Hence, it reasonably appears that if one of ordinary skill in the art, considering DE '183, were to apply McAleavey's method to a paper or cardboard web, that person would use McAleavey's embodiment wherein, as in the DE '183 method, the coating medium pumping rate and the space between the knife and moving web are varied simultaneously (col. 8, lines 61-65).

The examiner has not explained how the teaching of simultaneous dosing slot and doctor element adjustment in DE '183 would have fairly suggested to one of ordinary skill in the art who applied McAleavey's method to a paper or cardboard web, maintaining either the metering element actuating force or the volume of coating medium substantially constant while the other is reduced as required by the appellants' claim 1. The examiner, therefore, has not carried the burden of establishing a *prima facie* case of obviousness of the appellants' claimed invention.

DECISION

The rejections under 35 U.S.C. § 103 of claims 1-6 and 8-11 over McAleavey in view of DE '183, and claim 7 over McAleavey in view of DE '183 and Ueberschär, are reversed.

REVERSED

EDWARD C. KIMLIN Administrative Patent Judge	)
TERRY J. OWENS Administrative Patent Judge	) BOARD OF PATENT)) APPEALS AND) INTERFERENCES
CATHERINE TIMM Administrative Patent Judge	)

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